



**Washington State
Department of Transportation**

Memorandum

December 4, 2009

TO: Ted Trepanier, State Traffic Engineer
THRU: Harold White, Eastern Region Traffic Engineer
FROM: Chad Simonson, Project Engineer *JPM*
SUBJECT: XL2562; I-90 Spokane Port-of-Entry Weigh Station Relocation
Request Work Zone Speed Limit Reduction

Per Secretary's Executive Order E 1060.00, we are requesting that the posted regulatory speed limit with the above referenced location be reduced to 45 MPH.

The temporary work zone speed limit change is being requested for the following reasons:

- The maximum available room between the Spokane Bridge Road Overcrossing bridge abutment and the work zone dictates a 45 MPH shifting taper.
- The work will be scheduled to coincide with an Idaho Transportation Department project that abuts the work zone and will have a reduced speed limit of 45 MPH as part of its project.

This posted speed reduction will be in effect for a 10 day period in the month of June, 2010, between Milepost 298.76 to Milepost 299.82. The posted speed reduction will be in effect continuously. The exact dates and the locations may vary based on where the work activities that involve the safety issues listed above are present.

Approved:

State Traffic Engineer

Date

CFS:edp

Attachments:

**Work Zone Speed Reduction Worksheet
Traffic Control Plans**

**cc: State Traffic Engineer
Area Maintenance Superintendent
WSP District Captain
Traffic File
Contract File**



**Washington State
Department of Transportation**
Paula J. Hammond, P.E.
Secretary of Transportation

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NOTICE OF SPEED LIMIT REDUCTION

Limits of speed reduction
Interstate 90 MP 298.76 to MP 299.82
Westbound Lanes Only

Notice is hereby given by the Washington State Department of Transportation that the posted speed limit of 70 MPH on the above listed route and mile posts will be reduced to a legal speed limit of 45 MPH and will be signed accordingly, beginning in June 2010.

This speed reduction is necessary to ensure safe traffic operations during Weigh In Motion truck scale installation and PCC paving operations. The legal speed limit will be returned to 70 MPH at the conclusion of this installation.

Washington State Department of Transportation

Keith Metcalf
Eastern Region Administrator

WORK ZONE SPEED REDUCTION WORKSHEET

Date: 12-1-09 SR: I-90 Work Order/Contract Number: XL-2562

Project Name: I-90/Spokane Port of Entry Weigh Station Relocation

Existing Conditions

Posted Speed Limit: 70 MPH ADT: 58,000 Total // 28,800 vehicles westbound

Number of Lanes: Westbound 2 Lane Width: 12 FT Shoulder Width: 4ft, 10 ft

Type of Speed Limit Reduction Proposed:

☒ Continuous ☐ Variable ☐ Advisory

Proposed Speed Limit: 45 MPH Duration for Speed Reduction: 10 Days

Work Operation for proposed reduction: For the installation of new truck scales and PCCP roadway, the lanes will be reduced to a single westbound travel lane with a shifting taper onto a widened median shoulder to by pass the work area. The work area will be protected by temporary concrete barrier.

Mile Post Limits for reduction: MP 298.76 to MP 299.82

Work Zone Conditions Specific to Speed Reduction Request:

Traffic Safety Conditions: The maximum available distance from the Spokane Bridge Road over crossing bridge abutment to the beginning of the work area is 164 feet. The required minimum shifting taper length for a speed limit of 45 MPH is 157.5 ft. The minimum shifting taper length for a 50 MPH speed limit is 175 ft, which is longer than the available space. Therefore, a 45 MPH speed limit is necessary by design standards. Temporary concrete barrier will be located on the right side of traffic 2 ft. from the temporary lane through the work area.

The timing of the lane closure will coincide with the Idaho Transportation Department's project I-90, West of Coeur d'Alene Bridge Rehabs. This project reduces the speed limit on I-90 to 45 MPH for the 4 1/2 miles in Idaho leading into the State of Washington and the I-90 Port of Entry project. The approximate length from the Idaho/Washington state line to the work area is 1700 ft.

All Conflicting signing will be covered during this construction phase between the projects to reduce driver confusion.

Worker Safety Conditions: The work area is to be protected by temporary concrete barrier to provide a separation between the traffic and the workers. Using temporary

concrete barrier reduces the lateral buffer space between the workers and traffic and thus the amount of shifting that is required. Type C Steady Burning Low Intensity Warning lights will be mounted on the barrier to guide traffic through the work area.

Work Zone Actions Considered? The Project Engineer's Office reviewed a number of different options including seeing if the work area location could be moved. The work area consists of installing a Weigh in Motion scale and concrete roadway into and out of the scale. Different locations for the scale were not available that met the Washington State Patrol's requirements. WSP will use the scale in commercial vehicle enforcement. Also, different shifting taper lengths were looked at to maximize the taper length and minimize the speed reduction.

Speed Study WSP Enforcement

X Vicinity map and Traffic Control Plan attached

Justification Statement for speed reduction: A speed reduction of I-90 to 45 MPH is necessary for the construction of this phase of work. The available space between the work area and the existing bridge abutment over Spokane Bridge Road does not allow for a longer shifting taper necessary to have higher speed. This work is being scheduled to coincide with an Idaho Transportation Department (ITD) project which will have a speed reduction to 45 MPH. By continuing ITD's traffic control plan of a single lane at a reduced speed of 45 MPH, we will be able to construct this phase of the project with little or no additional impact to the traveling public.

Project Engineer Concurrence: _____
Comments: _____

Traffic Engineer Concurrence: _____ Disapproval: _____
Comments: _____

SUPPLEMENT #1

TO

TRANSPORTATION MANAGEMENT PLAN

XL-2562

I-90 Spokane Port of Entry - Weigh Station Relocation

MP 297.71 to MP 299.82

Prepared By:
Ed Preuschoff

Project Manager:
Duane Thomas

Project Engineer: 
Chad Simonson, P.E.

Assistant Regional Administrator for Development:
Mike Frucci, P.E.

Eastern Region Administrator:
Keith Metcalf, P.E.

I-90 SPOKANE PORT OF ENTRY – WEIGH STATION RELOCATION

The Mitigation Plan section for the WIM Scale installation is supplemented with the following:

WIM Scale - I-90

The traffic control area for the installation of the WIM scale at vic. MP 299.4 will consist of installing a scale and PCCP in the right lane of westbound I-90. A reduced speed limit of 45 MPH is proposed and will be submitted for approval per Directive E 1060.00. The reduced speed is necessary because of the maximum available distance from the Idaho Road over crossing bridge #090/593N to the beginning of the work area is 164 feet. The required minimum shifting taper length for a speed limit of 45 MPH is 157.5 ft. The minimum shifting taper length for a 50 MPH speed limit is 175 ft, which is longer than the available space.

The pavement leading into and leaving this scale will be changed from Hot Mix Asphalt (HMA) to Portland Cement Concrete pavement (PCCP). The work zone consists of reducing I-90 to one lane, adding additional pavement width to the median, shifting the traffic onto the newly paved width in the median, removing the existing outside lane of westbound I-90, installing Portland Cement Concrete Pavement and the Weigh In Motion scale. The preparatory work to construct the median widening and shifting the lane shall be accomplished during non-peak hours. For westbound traffic, the work window will be 7 PM to 6 AM. This will be enforced by the liquidated damages established by the TDO. This work, along with the necessary work to profile grind the roadway, will be completed within ten days. The lane closure will be in affect for a 10 day period, 24 hours a day, seven days a week once it is established. The work will take place in June of 2010 to coincide with an Idaho Transportation Department (ITD) project that abuts the Port of Entry project. The project engineer's office (PEO) will communicate the upcoming construction impacts using the Public Information Plan (PIP).

The traffic on I-90 will be in a single lane as it enters the work zone as part of an Idaho Transportation Department (ITD) project which abuts the project site. Truck traffic will continue to use the westbound off ramp to access the Port of Entry scales as currently required. Prior to work, Class A signs will be installed informing motorists of the temporary traffic revision. All existing signing and Class A signing will be covered during this construction phase between the projects to reduce driver confusion. Signing will be covered in accordance with Standard Specification 1-10.3(3)A.

The work zone ends before the Spokane Bridge Road Interchange westbound on ramp merge point with I-90. To provide a smooth transition from the on ramp to the freeway, the lane reduction on I-90 will continue to this point so the ramp traffic has its own lane to merge onto I-90.

I-90 SPOKANE PORT OF ENTRY – WEIGH STATION RELOCATION

Cooperation from the Washington State Patrol, the Idaho Transportation Department, and from the motoring public is required for the successful implementation of this plan.

The Mitigation Plan section is supplemented with the following:***WIM Scale -Spokane Bridge Road I/C Westbound On Ramp***

The traffic control area for the installation of the WIM scale on the westbound on ramp of the Spokane Bridge Road Interchange vic. S1 ramp MP 0.25 will consist of installing a scale in the lane of the westbound on ramp to I-90. The pavement leading into and leaving this scale will be changed from Hot Mix Asphalt (HMA) to Portland Cement Concrete pavement (PCCP). This work, along with the necessary work to profile grind the roadway, should be completed within ten days. The work zone does not offer room for through traffic to go by the site. The site has a 4 foot left shoulder and an 8 foot right shoulder with cement concrete curb for a section of the work zone. The lane closure will be in affect for a ten day period, 24 hours a day, seven days a week once it is established. The work will not take place until the new scale site is operational. The project engineer's office (PEO) will communicate the upcoming construction impacts using the Public Information Plan (PIP).

The Spokane Bridge Road Interchange traffic pattern will be modified. The west bound on ramp will be closed. During this closure, traffic will be detoured on Appleway Avenue to Liberty Lake and returned to I-90. Access to the Spokane County Park and other county roads will remain open. This will allow the eastbound and the westbound ramps to function for vehicles that wish to access Spokane Bridge Road. Washington State Patrol (WSP) enforcement may be required to emphasize this modification to normal traffic movements. Truck traffic will continue on I-90 to the new Port of Entry scale location. The existing signing that is in conflict with the ramp closure will be covered in accordance with Standard Specification 1-10.3(3)A. Prior to work Class A signs will be installed informing motorists of the temporary traffic revision.

Public Information Plan is supplemented with the following:

Publishing and posting a *Notice of Reduced Regulatory Speed Limit* is required in accordance with RCW 47.48.020. See the *Traffic Manual* M 51-02, Chapter 5, Appendix 5B.

Variable Message signs will not be used in conjunction with WIM Scale - I-90 installation since traffic control zone is a continuation of the traffic control zone established by the Idaho Transportation Department.

I-90 SPOKANE PORT OF ENTRY – WEIGH STATION RELOCATION

A notice to the district office of the Washington State Patrol is required for any speed limit reduction. Notice is sent by memorandum and must include the types of reductions, approximate dates, and any plans to coordinate speed enforcement. A follow up notice is required to confirm dates or other details.

I have reviewed this Transportation Management Plan (TMP) for the I-90 Spokane Port of Entry – Weigh Station Relocation project.

☒ Concur



Eastern Region Traffic Engineer

☐ Do not Concur

12/4/09
Date